

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

IN RE: FLINT WATER CASES

Case No. 5:16-cv-10444-JEL-MKM
Hon. Judith E. Levy, District Judge

This Document Relates To:
BELLWETHER III

Case No. 5:17-cv-10164-JEL-KGA

**DEFENDANTS VEOLIA NORTH AMERICA, LLC, VEOLIA NORTH
AMERICA, INC., AND VEOLIA WATER NORTH AMERICA
OPERATING SERVICES, LLC'S MOTION TO EXCLUDE OPINIONS
AND TESTIMONY OF DR. AARON SPECHT**

Pursuant to Federal Rules of Evidence 702 and 403, Defendants Veolia North America, LLC, Veolia North America, Inc., and Veolia Water North America Operating Services, LLC (VNA) move to exclude the opinions and associated testimony of Dr. Aaron Specht. [REDACTED]

[REDACTED]

[REDACTED] Further, Dr. Specht's attempt to use bone lead measurements of Flint children taken in 2019-2020 to extrapolate to bone lead levels in 2014 and to draw comparisons to severely poisoned children in China is not reliable, and any marginal relevance that this testimony might have would be substantially outweighed by the danger of unfair prejudice to VNA.

The Court denied VNA's motion to exclude Dr. Specht's opinions in Bellwether I. [REDACTED]

[REDACTED]

[REDACTED]

Dr. Specht's attempts to use bone lead measurements of Flint children taken in 2019-2020 to extrapolate to bone lead levels in 2014 and draw comparisons to children in China are new opinions and so the Court has not yet ruled on their admissibility.

As Local Rule 7.1 requires, on April 1, 2024, VNA sent counsel for Bellwether III Plaintiffs an email identifying each of the points raised in this motion. The same day, counsel for the Bellwether III Plaintiffs said that they did not concur in the motion.

Respectfully submitted,

**CAMPBELL, CONROY
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Dated: April 3, 2024

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**DEFENDANTS VEOLIA NORTH AMERICA, LLC, VEOLIA NORTH
AMERICA, INC., AND VEOLIA WATER NORTH AMERICA
OPERATING SERVICES, LLC'S BRIEF IN SUPPORT OF THEIR
MOTION TO EXCLUDE OPINIONS AND TESTIMONY OF
DR. AARON SPECHT**

STATEMENT OF THE ISSUES PRESENTED

1. Should the Court exclude Dr. Specht's opinions about the bone lead levels of the Bellwether III plaintiffs [REDACTED]
[REDACTED]
[REDACTED]?

VNA answers: "Yes."

Plaintiffs answer: "No."

2. Should the Court exclude Dr. Specht's attempt to use bone lead measurements of Flint children taken in 2019-2020 to extrapolate to bone lead levels in 2014 and draw comparisons to severely poisoned children in China because his opinions on these topics are unreliable and, if introduced at trial, would be substantially more prejudicial than probative?

VNA answers: "Yes."

Plaintiffs answer: "No."

CONTROLLING OR MOST APPROPRIATE AUTHORITIES

Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579 (1993)

Nelson v. Tenn. Gas Pipeline Co., 243 F.3d 244 (6th Cir. 2001)

Fed. R. Evid. 702

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INTRODUCTION

Dr. Specht offers opinions about lead levels in the Bellwether III plaintiffs' bones based on measurements taken with his novel portable x-ray fluorescence (pXRF) device. Dr. Specht opines that the Bellwether III plaintiffs have bone lead levels ranging from [REDACTED]

[REDACTED] Nonetheless, Dr. Specht states that [REDACTED]
[REDACTED]

VNA moved to exclude Dr. Specht's bone lead testing in the Bellwether I trial because his own published research shows that his pXRF device does not reliably measure low levels of lead in children's bones, and his modified methodology used in Flint has never been validated as producing accurate results in children either. The Court held that VNA's concerns about Dr. Specht's pXRF testing were "not without merit" but were "not sufficiently serious to warrant exclusion." Opinion & Order Denying VNA's Mot. to Exclude the Testimony and Report of Dr. Aaron Specht 8 (Specht BWI Order), ECF No. 447, PageID.35609.

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Separately, Dr. Specht also offers a new opinion in Bellwether III—that bone lead levels in children have a five-year half-life. He uses that opinion to extrapolate to bone lead levels in Flint children in 2014 and draw comparisons to severely lead poisoned children in China. This new opinion is unreliable and contrary to the facts, which plainly show that blood and bone lead levels of Flint children are nothing like those of severely poisoned children in China. Any marginal relevance is also substantially outweighed by the danger of unfair prejudice to VNA.

BACKGROUND

In its Bellwether I *Daubert* motion, VNA explained that Dr. Specht's published research found that his pXRF device does *not* produce accurate results in

children, and although he used a modified methodology in Flint, that methodology has never been validated as producing accurate results in children either.¹

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¹ In accordance with the Court's instruction not to repeat arguments, VNA incorporates and adopts its prior *Daubert* motion. See VNA's Mot. to Exclude the Testimony and Report of Dr. Aaron Specht, ECF No. 343, PageID.21586-21641; VNA's Reply in Support of Mot. to Exclude the Testimony and Report of Dr. Aaron Specht, ECF No. 397, PageID.30923-30958.

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² VNA submits Dr. Hesselink's declaration to assist the Court in resolving this *Daubert* motion—[REDACTED]—but does not intend to call Dr. Hesselink at trial. *See In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 738-39 (3d Cir. 1994) (district court may consider expert testimony at the *Daubert* stage that was not disclosed for use at trial); *see also, e.g., Arble v. State Farm Mut. Ins.*, 272 F.R.D. 604, 605-07 (D.N.M. 2011); *Drake v. United States*, No. 07-cv-707, 2009 WL 10703258, at *7-8 (N.D. Ala. Feb. 6, 2009).

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LEGAL STANDARD

Courts have the “basic gatekeeping obligation” of ensuring the “reliability and relevancy of expert testimony.” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 147, 152 (1999). A qualified expert may provide opinion testimony only if it will “help the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702(a). The expert opinion also must be “based on sufficient facts or data,” must be “the product of reliable principles and methods,” and must be the result of the expert “reliabl[y] appl[ying] [] the principles and methods to the facts of the case.” Fed. R. Evid. 702(b)-(d). In short, expert testimony must “rest[] on a reliable foundation and [be] relevant to the task at hand.” *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 597 (1993).

The Supreme Court has identified four factors that bear on whether an expert’s methodology “rests on a reliable foundation.” *Daubert*, 509 U.S. at 597. Those factors are (1) “whether a theory or technique can be or has been tested”; (2) “whether it has been subjected to peer review and publication”; (3) whether a technique has a known or potential rate of error and the existence of standards controlling its operation”; and (4) “whether the theory or technique enjoys general

acceptance in a relevant scientific community.” *Nelson v. Tenn. Gas Pipeline Co.*, 243 F.3d 244, 251 (6th Cir. 2001) (citing *Daubert*, 509 U.S. at 593-94).

Rule 403 permits the exclusion of relevant evidence when “its probative value is substantially outweighed by a danger of [] unfair prejudice, confusing the issues, [or] misleading the jury.” Fed. R. Evid. 403. Rule 403 is especially important when evaluating expert testimony, because “[e]xpert evidence can be both powerful and quite misleading.” *Daubert*, 509 U.S. at 595 (internal quotation marks omitted); see *Paoli*, 35 F.3d at 747 (“Rule 403 gives a judge more power over experts than over lay witnesses.”). Plaintiffs bear the burden of establishing the admissibility of Dr. Specht’s opinions by a preponderance of evidence. *Nelson*, 243 F.3d at 251.

ARGUMENT

I.

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II. Dr. Specht's Half-Life Extrapolations Are Not Reliable, And Any Marginal Relevance That They May Have Would Be Substantially Outweighed By The Risk Of Unfair Prejudice To VNA

In his Bellwether III report, Dr. Specht opines for the first time that bone lead levels in children have a five-year half-life. Specht Report 7. He did not offer that opinion in Bellwether I. Specht 2023 Dep. 358:17-359:6. Dr. Specht then uses that five-year half-life to attempt to extrapolate bone lead levels of Flint children in 2014 based on his scans in 2019-2020. He takes an average bone lead level for all Flint children in 2019-2020 (4.1 $\mu\text{g/g}$) and doubles it, opining that the average bone lead would have been 8.2 $\mu\text{g/g}$ in 2014. Specht Report 7. From that, he opines that 66% of Flint children had “lead exposure profiles most similar to severely poisoned children that were prescribed chelation therapy” in his China study. *Id.*⁶

Dr. Specht's attempt to extrapolate bone lead levels of Flint children in 2014 and draw comparisons to severely poisoned children in China is not remotely reliable and should be excluded. *See, e.g., General Elec. Co. v. Joiner*, 522 U.S. 136, 146-47 (1997) (expert testimony is inadmissible when “there is simply too great an analytical gap between the data and opinion proffered”).

First, Dr. Specht could not point to *any* scientific literature establishing that bone lead has a five-year half-life in children. Specht 2023 Dep. 360:6-22. He

⁶ Chelation therapy is typically reserved for children with blood lead levels exceeding 45 $\mu\text{g/dL}$. *See, e.g., Ex. 13, CDC, Recommended Actions Based on Blood Lead Level* (Oct. 27, 2021).

reached that opinion through calculations performed in this case (disclosed nowhere in his expert report), but his litigation-driven calculations have never been published, subjected to peer review, or independently verified.⁷

Second, Dr. Specht's extrapolation incorrectly assumes that any lead he measured in Flint children in 2019-2020 entered their bones in 2014 and that they have not experienced more recent exposures from other sources. He has no basis for that assumption; indeed, he readily admits that he does not know when exposures occurred. Specht 2023 Dep. 216:23-217:18. Plaintiffs' specific-causation experts, Dr. Sample and Dr. Bithoney, agree that any attempt to extrapolate bone lead levels in 2014 must account for more recent exposures. Sample Dep. 260:22-261:12; Ex. 15, Bithoney Dep. 525:4-526:7, 537:8-538:20. Dr. Specht makes no attempt to account for more recent exposures—and such an exercise would be well outside his limited role of identifying the Bellwether III plaintiffs' bone lead levels.

Third, Dr. Specht's opinion that 66% of children in Flint are comparable to severely poisoned children in his China study who required chelation is entirely unsupported. The exposed children in Dr. Specht's China study had blood lead levels above 25 µg/dL and average pXRF bone lead levels of 28.23 µg/g. Specht

⁷ Plaintiffs' specific-causation expert, Dr. Jennifer Sample, opines that the half-life of bone lead in children is "ten years." Ex. 14, Sample Dep. 258:17-259:24.

2019 at 19 tbl.2. There is no evidence that children in Flint (let alone 66% of children) had similar blood or bone lead levels or required chelation.

According to Dr. Specht's pXRF scans, children in Flint had average bone lead levels of 4.1 $\mu\text{g/g}$, nearly identical to his *control group* of unexposed children in China (3.8 $\mu\text{g/g}$ average from pXRF scans). Compare Specht Report 7, with Specht 2019 at 19 tbl.2. [REDACTED]

[REDACTED] Specht Report 7-16.

Moreover, Dr. Specht made no effort to check whether blood lead levels in Flint in 2014-2015 matched his speculation that 66% of Flint children had exposures similar to children in China who had blood lead levels above 25 $\mu\text{g/dL}$ and required chelation. Specht 2023 Dep. 366:7-17. Thousands of Flint children had their blood tested in 2014-2015—during the alleged exposures—and *none* had blood lead levels requiring chelation. Ex. 16, Kennedy et al., *Blood Lead Levels Among Children Aged <6 Years – Flint, Michigan, 2013-2016*, tbl.1, U.S. Dep't of Health & Human Servs., Morbidity & Mortality Weekly Report (2016) (out of 3,684 Flint children tested from April 24, 2014 to October 15, 2015, five had blood lead levels above 25 $\mu\text{g/dL}$ and none had blood lead levels above 40 $\mu\text{g/dL}$). Even Dr. Mona Hanna-Attisha—who originally called attention to potential lead concerns in Flint—did not suggest anything close to Dr. Specht's speculation. Ex. 17, M. Hanna-Attisha et al., *Elevated Blood Lead Levels in Children Associated With the Flint Drinking Water*

Crisis: A Spatial Analysis of Risk and Public Health Response, 106 Am. J. Pub. Health 283 (2016) (finding that the incidence of children with blood levels above 5 µg/dL increased from 2.4% to 4.9% after the water-source change).

Even if Dr. Specht's extrapolation were reliable, any marginal relevance it might have would be substantially outweighed by the danger of unfair prejudice to VNA. Fed. R. Evid. 403. Dr. Specht's extrapolation is based on Flint children as a whole (or at least the 3,000-plus children who underwent pXRF scans), not the Bellwether III plaintiffs. Dr. Specht admits that the Bellwether III plaintiffs have

Specht 2023 Dep. 354:19-355:1. Dr. Specht's opinion that 66% of Flint children are comparable to severely poisoned children in China who required chelation is not only unreliable, but it would inflame the jury and distract from whether the Bellwether III plaintiffs were injured from lead exposures from the water switch.

CONCLUSION

The Court should exclude the testimony and report of Dr. Aaron Specht.

Respectfully submitted,

**CAMPBELL, CONROY
& O'NEIL P.C.**

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Veolia Water North America Operating Services, LLC*

Dated: April 3, 2024

CERTIFICATE OF SERVICE

I hereby certify that April 3, 2024, I electronically filed the foregoing document with the Clerk of the Court using the ECF System, which will send notification to the ECF counsel of record.

Respectfully submitted,

/s/ James M. Campbell

Dated: April 3, 2024